

Appl. No. 09/343,406  
Amdt. dated July 10, 2003  
Reply to Office Action of March 10, 2003

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-45 (Canceled).

Claim 46 (Currently amended):

A peptide derived from glutamic acid decarboxylase having a length of at most 25 amino acids and comprising

(a) a peptide of at least ~~6~~ 10 contiguous amino acids of an amino acid sequence selected from the group consisting of SEQ ID NOS: 2, 3 and 20-39, or

(b) a peptide or peptide derivative having a length of ~~6~~ 10 to 25 amino acids that is at least 50% homologous to the peptide of (a) and which exhibits a specificity or/and affinity which is essentially equivalent to that of the peptide (a) and includes anchor positions for binding to alleles of human MHC class II molecules DR3 or DR4, wherein the peptide derivative is not SEQ ID NO:19, and wherein the alleles of MHC class II are selected from the group consisting of DR B1 ~~101~~ 301, DR B1 401, DR B1 402, and DR B1 404, and DR B1 1601; wherein in said peptide derivatives the peptide backbone and or the reactive amino acid side groups are derivatized.

Claim 47 (Canceled).

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Claim 48 (Currently amended):

The peptide of claim 46, wherein the peptide comprises

(a) a peptide of at least ~~6~~ 10 contiguous amino acids of an amino acid sequence selected from the group consisting of SEQ ID NO:2 and SEQ ID NO:3, or

(b) a peptide or peptide derivative having a length of ~~6~~ 10 to 25 amino acids that is at least 50% homologous to the peptide of (a) and which exhibits a specificity or/and affinity which is essentially equivalent to that of the peptide (a) and includes anchor positions for binding to alleles of human MHC class II molecules DR3 or DR4, wherein the peptide derivative is not SEQ ID NO:19, and wherein the alleles of MHC class II are selected from the group consisting of DR B1 ~~401~~ 301, DR B1 401, DR B1 402, and DR B1 404, and DR B1 1601; wherein in said peptide derivatives the peptide backbone and or the reactive amino acid side groups are derivatized.

Claims 49-50 (Canceled).

Claim 51 (Previously added):

The peptide of claim 46, wherein the peptide carries a marker group.

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Claim 52 (Previously added):

A pharmaceutical composition, comprising a peptide as claimed in claim 46, in combination with a pharmaceutically acceptable carrier.

Claim 53 (Previously added):

The pharmaceutical composition of claim 52, further comprising an accessory stimulating component.

Claim 54 (Previously added):

The pharmaceutical composition of claim 53, wherein the accessory stimulating component is a cytokine, surface antigen B7, or both.

Claims 55-58 (Canceled).

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**New Claims:**

Claim 59 (New):

A peptide having a length of at most 25 amino acids and comprising a peptide of at least 10 contiguous amino acids of an amino acid sequence selected from the group consisting of SEQ ID NO'S:2, 3 and 20-39.

Claim 60 (New):

The peptide of claim 59, wherein the peptide comprises a peptide of at least 10 contiguous amino acids of an amino acid sequence selected from the group consisting of SEQ ID NO:2 and SEQ ID NO:3.

Claim 61 (New):

The peptide of claim 59, wherein the peptide carries a marker group.

Claim 62 (New):

A pharmaceutical composition, comprising a peptide as claimed in claim 59, in combination with a pharmaceutically acceptable carrier.

Claim 63 (New):

The pharmaceutical composition of claim 62, further comprising an accessory stimulating component.

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Claim 64 (New):

The pharmaceutical composition of claim 63, wherein the accessory stimulating component is a cytokine, surface antigen B7, or both.

Claim 65 (New):

The peptide of claim 46 wherein the peptide comprises at least 12 contiguous amino acids of an amino acid sequence selected from the group consisting of SEQ ID NOS: 2, 3 and 20-39, or

(b) a peptide or peptide derivative having a length of at least 12 contiguous amino acids that is at least 50% homologous to the peptide of (a) and which exhibits a specificity or/and affinity which is essentially equivalent to that of the peptide (a) and includes anchor positions for binding to alleles of human MHC class II molecules DR3 or DR4, wherein the peptide derivative is not SEQ ID NO:19, and wherein the alleles of MHC class II are selected from the group consisting of DR B1 301, DR B1 401, DR B1 402, and DR B1 404; wherein in said peptide derivatives the peptide backbone and or the reactive amino acid side groups are derivatized.